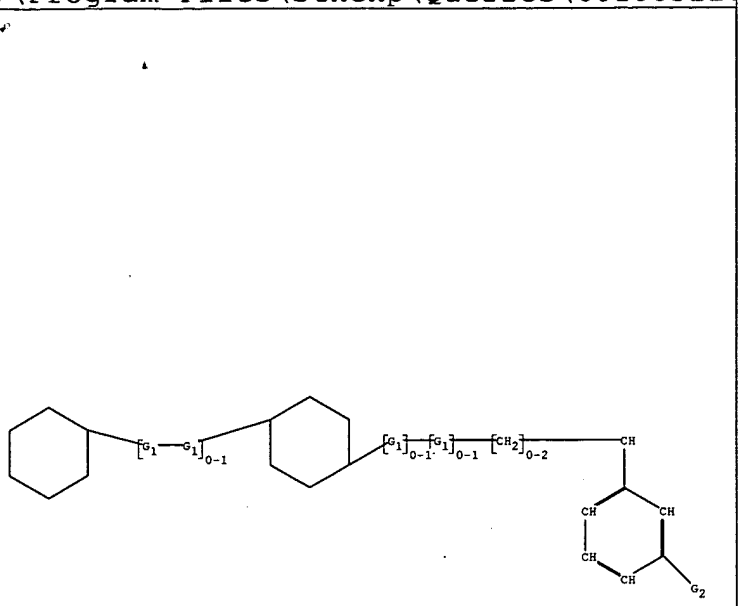
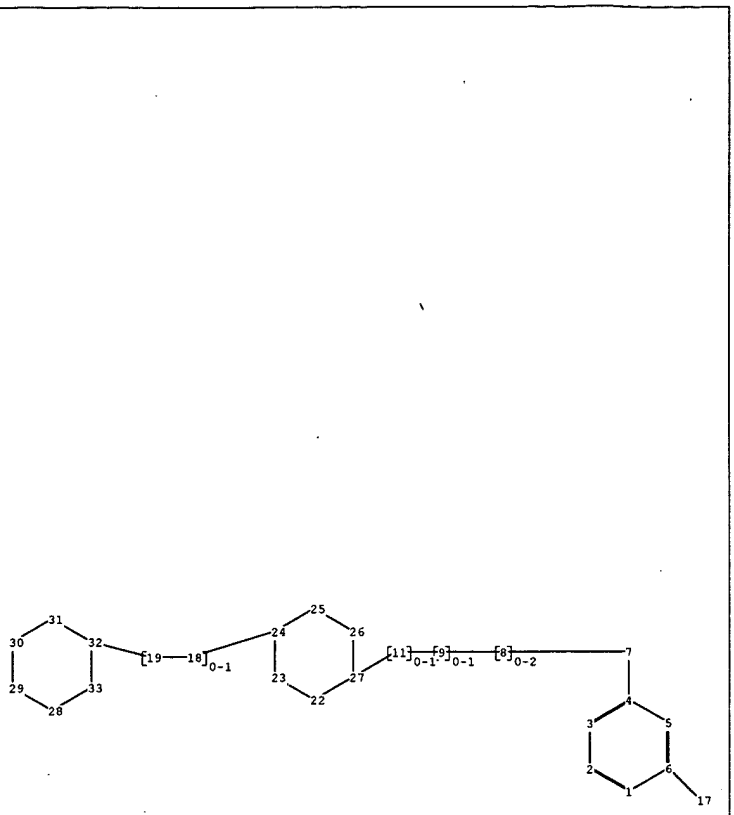
C:\Program Files\Stnexp\Queries\601803zz.





chain nodes :
7 8 9 11 17 18 19
ring nodes :
1 2 3 4 5 6 22 23 24 25 26 27 28 29 30 31 32 33
chain bonds :
4-7 6-17 7-8 8-9 9-11 11-27 18-19 18-24 19-32
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 22-23 22-27 23-24 24-25 25-26 26-27
28-29 28-33 29-30 30-31 31-32 32-33
exact/norm bonds :
6-17 8-9 9-11 11-27 18-19 18-24 19-32 22-23 22-27 23-24 24-25
25-26 26-27 28-29 28-33 29-30 30-31 31-32 32-33
exact bonds :
4-7 7-8
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

G1:C,O

G2:Cl,Br,F,I,CH3,Et,n-Pr,i-Pr,n-Bu,i-Bu,CF2,CF3,MeO,CN,NO2

G3:Cl,Br,F,I,CF2,CCl2,CBr2,MeO,EtO,CN

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS
11:CLASS 17:CLASS 18:CLASS 19:CLASS 22:Atom 23:Atom 24:Atom 25:Atom
26:Atom 27:Atom 28:Atom 29:Atom 30:Atom 31:Atom 32:Atom 33:Atom

AN 1935:1102 CAPLUS
DN 29:1102
OREF 29:134c-h
ED Entered STN: 16 Dec 2001
TI Pinacol-pinacolone rearrangement. VI. The rearrangement of symmetrical aromatic pinacols
AU Bachmann, W. E.; Ferguson, James W.
SO Journal of the American Chemical Society (1934), 56, 2081-4
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA Unavailable
CC 10 (Organic Chemistry)
OS CASREACT 29:1102
AB cf. C. A. 28, 1690.5. Migration aptitudes of aryl groups have been determined to date as follows: MeOC6H4 500, EtOC6H4 500, p-MeC6H4 15.7, p-PhC6H4 11.5, iso-PrC6H4 9, p-EtC6H4 5, m-MeC6H4 1.95, m-MeOC6H4 1.6, Ph 1, p-IC6H4 1, p-BrC6H4 0.7, p-ClC6H4 0.66, o-MeOC6H4 0.3, m-BrC6H4, m-ClC6H4, o-BrC6H4, o-ClC6H4 0. It is apparent that the position occupied in the C6H6 ring is of importance; the p-position engenders the greatest migration aptitude, the m-position less and the o-least. The series of electronegativity is similar to that of the migration aptitudes only if the o-substituted groups are neglected; the o-groups have a high electronegativity but possess little tendency to migrate. It is possible to predict with considerable accuracy the manner in which mixed sym. pinacols will rearrange. 4-EtOC6H4Bz m. 47°. 4-Ethoxy-4'-methylbenzophenone, b13 207-17°, m. 84-5°, results in 93% yield from p-MeC6H4COCl and PhOEt. 3-Methoxy-3'-methylbenzophenone, b22 212-13°, in 65% yield from m-MeC6H4MgBr and 3-MeOC6H4CN. 4-Methoxy-3'-methylbenzophenone, b35 238-40°, 79% yield from m-MeC6H4MgBr and 4-MeOC6H4CN or in 82% yield from the oxidation of 4-methoxy-3'-methylbenzohydrol, m. 51-2° (55% yield from m-MeC6H4MgBr and p-MeOC6H4CHO). 3-Chloro-4'-phenylbenzophenone, m. 106-7°, in 65% yield from m-ClC6H4COCl and Ph2 with AlCl3. 3-Chloro-4'-methylbenzophenone, m. 97-8°, 56% yield. The following benzopinacols are reported: 4,4'-di-EtO, m. 141-2°; 4,4'-diethoxy-4'',4'''-dimethyl, m. 168-9°; 3,3'-di-MeO, m. 140-2°; 3,3'-dimethoxy-4'',4'''-dimethyl, m. 160-2°; 3,3'-dimethoxy-4'',4'''-diphenyl, m. 172-3°; 3,3'-dimethoxy-3'',3'''-dimethyl, m. 139-40°; 4,4'-dimethoxy-3'',3'''-dimethyl, m. 144-5°; 4,4'-dimethoxy-4'',4'''-dichloro, m. 181-2°; 3,3'-dichloro-4'',4'''-diphenyl, m. 174-5°. The colors given with EtONa are reported. The rearrangement of these pinacols are discussed, and the migration percent for various groups determined 3-Methoxy-4',4''-diphenyltriphenylmethane, m. 149-9.5°; 4-chloro-4',4''-dimethoxytriphenylmethane, m. 65-6°; 3-chloro-4',4''-diphenyltriphenylmethane, m. 144-5°; these structures were proved by synthesis.
IT Anisyl group
Bromophenyl group
Chlorophenyl group
Cumenyl group
Phenetyl group
Tolyl group
(migration in pinacols)
IT Chemical constitution
(migration of aryl groups in pinacols and)
IT Aryl groups
Phenyl group
(migration of, in pinacols)
IT Rearrangements
(pinacol-pinacolone)
IT Benzopinacol, s-m,m'-dichloro-s-p'',p'''-diphenyl-
Benzopinacol, s-m,m'-dimethoxy-
Benzopinacol, s-m,m'-dimethoxy-s-m'',m'''-dimethyl-

Benzopinacol, s-m,m'-dimethoxy-s-p'',p'''-diphenyl-
Benzopinacol, s-m,m'-dimethoxy-s-s-p'',p'''-dimethyl-
Benzopinacol, s-p,p'-dichloro-s-p'',p'''-dimethoxy-
Benzopinacol, s-p,p'-diethoxy-
Benzopinacol, s-p,p'-diethoxy-s-p'',p'''-dimethyl-
Benzopinacol, s-p,p'-dimethoxy-s-m'',m'''-dimethyl-
Methane, di-p-anisyl(p-chlorophenyl)-

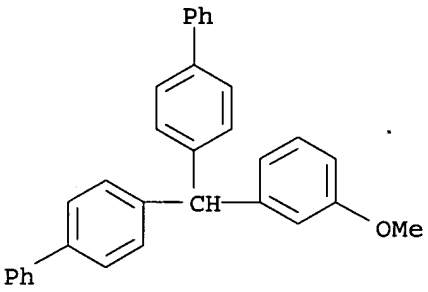
IT p-Ethylphenyl group
p-Iodophenyl group
p-Phenylphenyl group
(migration in pinacols)

IT Pinacols
(rearrangement of)

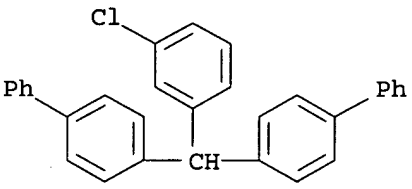
IT 6477-29-8, 1,3-Propanedione, 1,3-di-2-mesityl- 13395-60-3, Benzophenone, 3-chloro-4'-methyl- 27982-06-5, Benzophenone, p-ethoxy- 29574-60-5, Propanetrione, di-2-mesityl- 37825-77-7, Benzohydrol, p-methoxy-m'-methyl- 53039-63-7, Benzophenone, 4-methoxy-3'-methyl- 65629-84-7, Benzophenone, 4-ethoxy-4'-methyl- 71372-40-2, Benzophenone, 3-methoxy-3'-methyl- 98257-43-3, Benzophenone, 3-chloro-4'-phenyl-
856203-37-7, Methane, m-anisylbis(p-phenylphenyl)-
856203-37-7, Anisole, m-(p,p'-diphenylbenzohydryl)-
856204-06-3, Methane, (m-chlorophenyl)bis(p-phenylphenyl)-
(preparation of)

IT **856203-37-7**, Methane, m-anisylbis(p-phenylphenyl)-
856204-06-3, Methane, (m-chlorophenyl)bis(p-phenylphenyl)-
(preparation of)

RN 856203-37-7 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



RN 856204-06-3 CAPLUS
CN Methane, (m-chlorophenyl)bis(p-phenylphenyl)- (3CI) (CA INDEX NAME)



AN 2005:1026833 CAPLUS
DN 143:326090
ED Entered STN: 23 Sep 2005
TI Preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivatives for use in treating metabolic disorders
IN Akerman, Michelle; Houze, Jonathan; Lin, Daniel C. H.; Liu, Jiwen; Luo, Jian; Medina, Julio C.; Qiu, Wei; Reagan, Jeffrey D.; Sharma, Rajiv; Shuttleworth, Stephen J.; Sun, Ying; Zhang, Jian; Zhu, Liusheng
PA Amgen Inc., USA; et al.
SO PCT Int. Appl., 163 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 25-17 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 1, 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005086661	A2	20050922	WO 2005-US5815	20050224

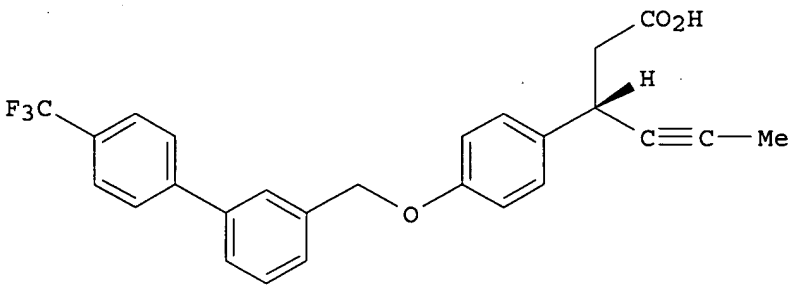
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2004-548741P P 20040227
US 2004-601579P P 20040812

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005086661	ICM	A61K

GI



II

AB Title compds. Q-L1-P-L2-M-X-L3-A [Q = H, (hetero)aryl, alkyl, etc.; L1 = bond, alkylene, heteroalkylene, O, etc.; P = (hetero)aromatic, cycloalkylene, etc.; L2 = bond, alkylene, heteroalkylene, etc.; M = (hetero)aromatic, cycloalkylene, arylalkylene, etc.; X = divalent alkyl, (un)substituted-N; O, SO0-2; L3 = bond, alkylene, heteroalkylene, etc.; A = COOH, tetrazolyl, SO3H, PO3H2, etc.; I] are prepared For instance, (S)-3-[4-((4'-trifluoromethyl-1,1'-biphenyl-3-yl)methoxy)phenyl]hexan-4-ynoic acid (II) is prepared in 5 steps from (S)-3-(4-hydroxyphenyl)hexan-4-ynoic acid Me ester (preparation given), 4-(trifluoromethyl)phenylboronic acid and 3-bromobenzoic acid. II has an EC50 < 0.1 μM for human G protein-coupled receptor GPR40. I are useful for the treatment of type II

diabetes.

ST metabolic disorder gpcr arylmethoxyphenylalkylcarboxylicacid prepn

IT G protein-coupled receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GPCR40; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Antiarteriosclerotics
(antiatherosclerotics; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Nerve, disease
(diabetic neuropathy; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Eye, disease
(diabetic retinopathy; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Sexual behavior
(disorder; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dyslipidemia; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hyperlipidemia; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hyperlipoproteinemia; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Acidosis
(ketoacidosis; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Disease, animal
(metabolic syndrome X; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT Anticoagulants
Antidiabetic agents
Antihypertensives
Antiobesity agents
Antitumor agents
Atherosclerosis
Cardiovascular agents
Cardiovascular system, disease
Diabetes insipidus
Diabetes mellitus
Dyspepsia
Edema
Human
Hypercholesterolemia
Hyperglycemia
Hypertension
Hypoglycemia
Kidney, disease
Neoplasm

Obesity
Skin, disease
(preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT 657-24-9, Metformin
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(combination pharmaceutical; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT 50-99-7, D-Glucose, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(intolerance; preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT 865231-83-0P 865231-90-9P 865232-66-2P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT 86271-60-5P 113085-35-1P 113085-36-2P 119998-52-6P 865231-45-4P
865231-46-5P 865231-47-6P 865231-48-7P 865231-49-8P 865231-50-1P
865231-51-2P 865231-52-3P 865231-53-4P 865231-54-5P 865231-55-6P
865231-56-7P 865231-57-8P 865231-58-9P 865231-59-0P 865231-60-3P
865231-61-4P 865231-62-5P 865231-63-6P 865231-64-7P 865231-65-8P
865231-66-9P 865231-67-0P 865231-68-1P 865231-69-2P 865231-70-5P
865231-71-6P 865231-72-7P 865231-73-8P 865231-74-9P 865231-75-0P
865231-76-1P 865231-77-2P 865231-78-3P 865231-79-4P 865231-80-7P
865231-81-8P 865231-82-9P 865231-84-1P 865231-85-2P 865231-86-3P
865231-87-4P 865231-88-5P 865231-89-6P 865231-91-0P 865231-92-1P
865231-93-2P 865231-94-3P 865231-95-4P 865231-96-5P 865231-97-6P
865231-98-7P 865231-99-8P 865232-00-4P 865232-01-5P 865232-02-6P
865232-03-7P 865232-04-8P 865232-05-9P 865232-06-0P 865232-07-1P
865232-08-2P 865232-09-3P 865232-10-6P 865232-11-7P 865232-12-8P
865232-13-9P 865232-14-0P 865232-15-1P 865232-16-2P 865232-17-3P
865232-18-4P 865232-19-5P 865232-20-8P 865232-21-9P 865232-22-0P
865232-23-1P 865232-24-2P 865232-25-3P 865232-26-4P 865232-27-5P
865232-28-6P 865232-29-7P 865232-30-0P 865232-31-1P 865232-32-2P
865232-33-3P 865232-34-4P 865232-35-5P 865232-36-6P 865232-37-7P
865232-38-8P 865232-39-9P 865232-40-2P 865232-41-3P 865232-42-4P
865232-43-5P 865232-44-6P 865232-45-7P 865232-46-8P 865232-47-9P
865232-48-0P 865232-49-1P 865232-50-4P 865232-51-5P 865232-52-6P
865232-53-7P 865232-54-8P 865232-55-9P 865232-56-0P 865232-57-1P
865232-58-2P 865232-59-3P 865232-60-6P 865232-61-7P 865232-62-8P
865232-63-9P 865232-64-0P 865232-65-1P 865232-67-3P 865232-68-4P
865232-69-5P 865232-70-8P 865232-71-9P 865232-72-0P 865232-73-1P
865232-74-2P 865232-75-3P 865232-76-4P 865232-77-5P 865232-78-6P
865232-79-7P 865232-80-0P 865232-81-1P 865232-82-2P 865232-83-3P
865232-84-4P 865232-85-5P 865232-86-6P 865232-87-7P 865232-88-8P
865232-89-9P 865232-90-2P 865232-91-3P 865232-92-4P 865232-93-5P
865232-94-6P 865232-95-7P 865232-96-8P 865232-97-9P 865232-98-0P
865232-99-1P 865233-00-7P 865233-01-8P 865233-02-9P 865233-03-0P
865233-04-1P 865233-05-2P 865233-06-3P 865233-07-4P 865233-08-5P
865233-09-6P 865233-10-9P 865233-11-0P 865233-12-1P 865233-13-2P
865233-14-3P 865233-15-4P 865233-16-5P **865233-17-6P**
865233-18-7P **865233-19-8P** 865233-20-1P **865233-21-2P**
865233-22-3P 865233-23-4P 865233-24-5P 865233-25-6P 865233-26-7P
865233-27-8P 865233-28-9P 865233-29-0P 865233-30-3P 865233-31-4P
865233-32-5P 865234-04-4P 865234-05-5P 865303-22-6P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs.

as GPCR40 ligands for use in treating metabolic disorders)

IT 865233-40-5P
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT 57-71-6 67-64-1, Acetone, reactions 78-39-7, 1,1,1-Triethoxyethane 78-95-5, Chloroacetone 89-92-9, 2-Methylbenzyl bromide 95-48-7, 2-Methylphenol, reactions 96-50-4, 2-Aminothiazole 105-36-2, Ethyl bromoacetate 107-11-9, Allylamine 110-87-2, 3,4-Dihydro-2H-pyran 123-08-0, 4-Hydroxybenzaldehyde 288-13-1, Pyrazole 455-19-6, 4-(Trifluoromethyl)benzaldehyde 459-57-4, 4-Fluorobenzaldehyde 585-76-2, 3-Bromobenzoic acid 696-59-3, 2,5-Dimethoxytetrahydrofuran 824-94-2, 4-Methoxybenzyl chloride 824-98-6, 3-Methoxybenzyl chloride 836-42-0, 1-Benzyloxy-4-chloromethylbenzene 938-96-5, 2-(4-Hydroxyphenyl)propanoic acid 2033-24-1, Meldrum's acid 2450-71-7, Propargylamine 3132-99-8, 3-Bromobenzaldehyde 4071-88-9, Ethyl trimethylsilylacetate 5292-43-3, tert-Butyl bromoacetate 5470-11-1 5713-61-1, 2-Thienylmagnesium bromide 6049-54-3, β-Tyrosine 6547-53-1, 4-(Benzyloxy)phenylacetic acid 7341-24-4, 2-Methylbenzyl mercaptan 10160-87-9, Propiolaldehyde diethyl acetal 14199-15-6, Methyl 4-hydroxyphenylacetate 14704-31-5, 3-(Bromomethyl)biphenyl 16466-97-0, 1-Propynylmagnesium bromide 25913-05-7, (4-Fluorophenyl)(4-hydroxyphenyl)methanone 38323-22-7, Dimethyl (4-nitrobenzylidene)malonate 38614-36-7, 2-Methyl-1-propenylmagnesium bromide 49617-83-6, 1-(Bromomethyl)-3-iodobenzene 51947-45-6, Dimethyl (4-hydroxybenzylidene)malonate 61291-97-2 65295-58-1, 3-(4-Fluorophenoxy)benzyl bromide 95184-07-9, 3-Methyl-2-thienylmagnesium bromide 111787-91-8 128796-39-4, 4-(Trifluoromethyl)phenylboronic acid 147455-46-7, 2-Thiazolylmagnesium bromide 175135-47-4 203444-17-1 209919-30-2, 4-Chloro-2-methylphenylboronic acid 261761-59-5 499995-80-1 638214-11-6 865234-02-2 865234-03-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT 17474-27-0P 77182-73-1P 115062-69-6P 126485-55-0P 174258-39-0P 199528-28-4P 474295-85-7P 475480-98-9P 613240-28-1P 856382-93-9P 865233-33-6P 865233-34-7P 865233-35-8P 865233-36-9P 865233-37-0P 865233-38-1P 865233-39-2P 865233-41-6P 865233-42-7P 865233-43-8P 865233-44-9P 865233-45-0P 865233-46-1P 865233-47-2P 865233-48-3P 865233-49-4P 865233-50-7P 865233-51-8P 865233-52-9P 865233-53-0P 865233-54-1P 865233-55-2P 865233-56-3P 865233-57-4P 865233-58-5P 865233-59-6P 865233-60-9P 865233-61-0P 865233-62-1P 865233-63-2P 865233-64-3P 865233-65-4P 865233-66-5P 865233-67-6P 865233-68-7P 865233-69-8P 865233-70-1P 865233-71-2P 865233-72-3P 865233-73-4P 865233-74-5P 865233-75-6P 865233-76-7P 865233-77-8P 865233-78-9P 865233-79-0P 865233-80-3P 865233-81-4P 865233-82-5P 865233-83-6P 865233-84-7P 865233-85-8P 865233-86-9P 865233-87-0P 865233-88-1P 865233-89-2P 865233-90-5P 865233-91-6P 865233-92-7P 865233-93-8P 865233-94-9P 865233-95-0P 865233-96-1P 865233-97-2P 865233-98-3P 865233-99-4P 865234-00-0P 865234-01-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

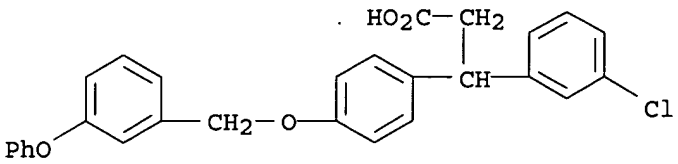
IT 126456-43-7, (1S,2R)-1-Amino-2-indanol
RL: RGT (Reagent); RACT (Reactant or reagent)
(preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT 9004-10-8, Insulin, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(resistance; preparation of arylmethoxyphenyl-alkylcarboxylic acids and

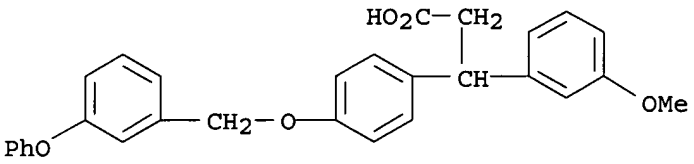
related derivs. as GPCR40 ligands for use in treating metabolic disorders)

IT **865233-17-6P 865233-19-8P 865233-21-2P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of arylmethoxyphenyl-alkylcarboxylic acids and related derivs. as GPCR40 ligands for use in treating metabolic disorders)

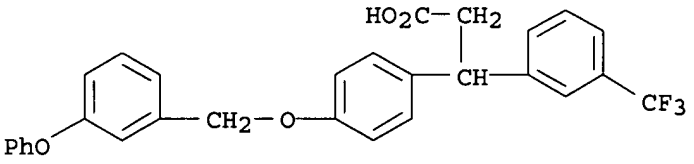
RN 865233-17-6 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



RN 865233-19-8 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



RN 865233-21-2 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



L17 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:993115 CAPLUS
DN 141:429742
ED Entered STN: 19 Nov 2004
TI Optically active compounds, their polymers, liquid-crystal compositions, and displays
IN Takeuchi, Kiyofumi; Hasebe, Hiroshi
PA Dainippon Ink and Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 24 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07C069-94
ICS C08F020-10; C09K019-38; C09K019-54; G02F001-13; C07M007-00
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 75
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

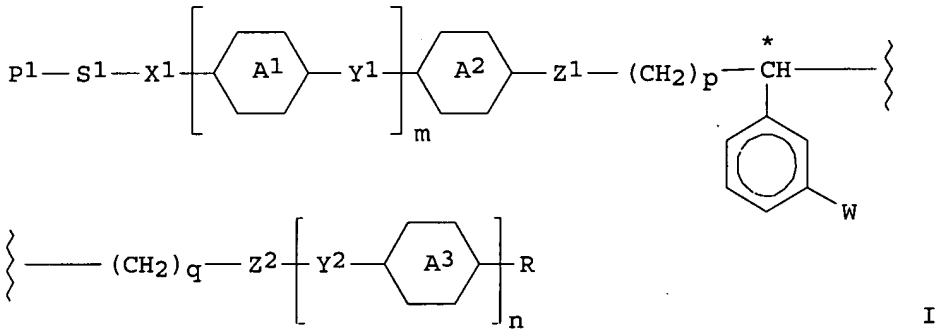
PI	JP 2004323412	A2	20041118	JP 2003-119674	20030424
PRAI	JP 2003-119674		20030424		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004323412	ICM	C07C069-94
	ICS	C08F020-10; C09K019-38; C09K019-54; G02F001-13; C07M007-00
JP 2004323412	FTERM	4H006/AA01; 4H006/AA03; 4H006/AB64; 4H006/BJ50; 4H006/BP30; 4H027/BA01; 4H027/BA11; 4H027/BD14; 4H027/CB01; 4H027/CC04; 4H027/CD03; 4H027/CD04; 4H027/CE03; 4H027/CF03; 4H027/CM03; 4H027/CM04; 4H027/CP01; 4H027/CT02; 4H027/CW02; 4J100/AL08P; 4J100/AL08Q; 4J100/AL66R; 4J100/AT08P; 4J100/BA02Q; 4J100/BA03R; 4J100/BA15P; 4J100/BA15Q; 4J100/BA15R; 4J100/BA21P; 4J100/BA40P; 4J100/BC04P; 4J100/BC43P; 4J100/BC43Q; 4J100/BC43R; 4J100/BC44P; 4J100/BC44Q; 4J100/BC44R; 4J100/JA32; 4J100/JA39

OS MARPAT 141:429742

GI



I

AB The compds. comprise I (A1-A3, S1, X1, Y1, Y2, Z1, Z2, W, R, m, n, p, and q are defined in the document) having one asym. center. I-containing liquid-crystal compns., polymers of I, and displays containing the polymers are also claimed. The compds. show large helical induction.

ST optical active liq crystal helical induction; display polymer liq crystal helical induction

IT Liquid crystals, polymeric
(cholesteric; optically active polymerizable compds. with large helical induction for liquid-crystal displays)

IT Liquid crystals
(nematic; optically active polymerizable compds. with large helical induction for liquid-crystal displays)

IT Liquid crystal displays
(optically active polymerizable compds. with large helical induction for liquid-crystal displays)

IT 47304-16-5P 134903-88-1P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediates; optically active polymerizable compds. with large helical induction for liquid-crystal displays)

IT **793717-28-9P 793717-29-0P**
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(optically active polymerizable compds. with large helical induction

for liquid-crystal displays)

IT **793705-53-0P 793705-57-4P**
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(optically active polymerizable compds. with large helical induction for liquid-crystal displays)

IT 58743-75-2DP, mixts. 85583-83-1DP, mixts., polymers 86776-50-3DP, mixts. 95906-34-6DP, mixts., polymers 96184-40-6DP, mixts., polymers 96184-42-8DP, mixts., polymers 128060-75-3DP, mixts., polymers 129738-34-7DP, mixts., polymers 129738-42-7DP, mixts., polymers 155041-85-3DP, mixts., polymers 208467-20-3DP, mixts., polymers 251969-45-6DP, mixts., polymers **793705-53-0DP**, mixts., polymers
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(optically active polymerizable compds. with large helical induction for liquid-crystal displays)

IT **793705-60-9 793705-62-1**
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(optically active polymerizable compds. with large helical induction for liquid-crystal displays)

IT 79-10-7, Acrylic acid, reactions 2009-83-8, 6-Chloro-1-hexanol 58574-03-1 129940-69-8 329346-52-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactants; optically active polymerizable compds. with large helical induction for liquid-crystal displays)

IT **793717-28-9P 793717-29-0P**
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(optically active polymerizable compds. with large helical induction for liquid-crystal displays)

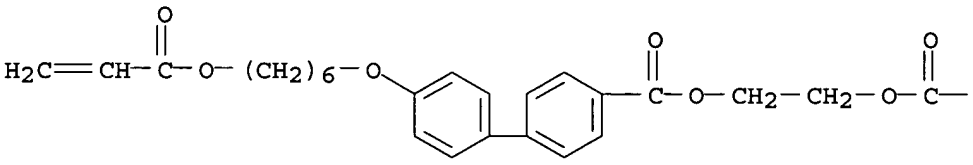
RN 793717-28-9 CAPLUS

CN [1,1'-Biphenyl]-4-carboxylic acid, 4'-[(1-oxo-2-propenyl)oxy]-, propyl ester, polymer with 1,2-ethanediyl bis[4'-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy][1,1'-biphenyl]-4-carboxylate], (1S)-1-(3-methoxyphenyl)ethyl 4'-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy][1,1'-biphenyl]-4-carboxylate and 4-(trans-4-propylcyclohexyl)phenyl 2-propenoate (9CI) (CA INDEX NAME)

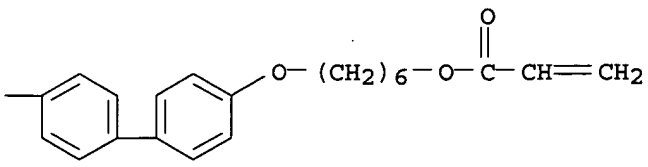
CM 1

CRN 793705-59-6
CMF C46 H50 O10

PAGE 1-A



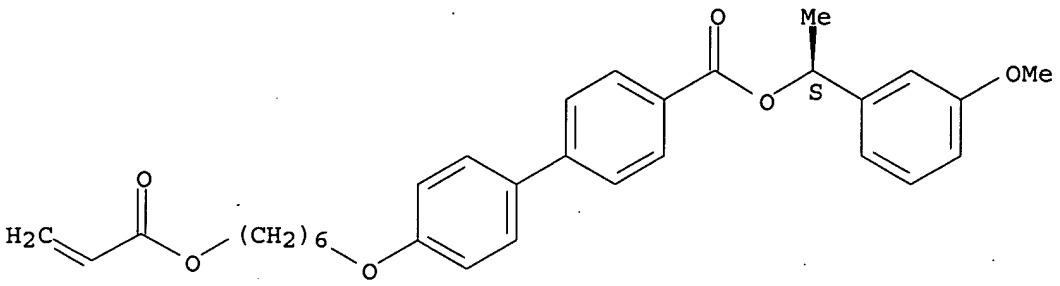
PAGE 1-B



CM 2

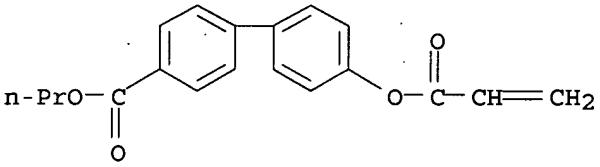
CRN 793705-53-0
CMF C31 H34 O6

Absolute stereochemistry.



CM 3

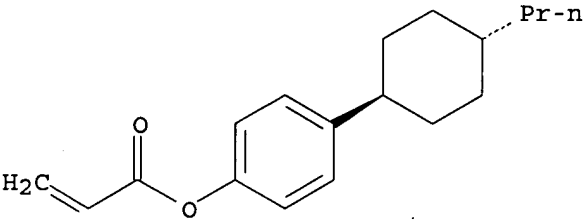
CRN 768393-77-7
CMF C19 H18 O4



CM 4

CRN 168274-89-3
CMF C18 H24 O2

Relative stereochemistry.



RN 793717-29-0 CAPLUS
CN [1,1'-Biphenyl]-4-carboxylic acid, 4'-[(1-oxo-2-propenyl)oxy]-, propyl ester, polymer with 1,2-ethanediyl bis[4'-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy][1,1'-biphenyl]-4-carboxylate], (1S)-1-(3-methoxyphenyl)-1,2-ethanediyl bis[4'-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy][1,1'-biphenyl]-4-carboxylate] and 4-(trans-4-propylcyclohexyl)phenyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 793705-59-6

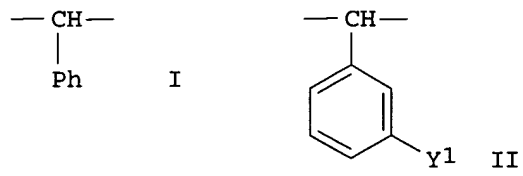
AN 2004:100386 CAPLUS
DN 140:154599
ED Entered STN: 08 Feb 2004
TI Method of increasing helical twisting power, optically active compound, liquid crystal composition containing the same, and liquid crystal display device
IN Nakata, Hidetoshi; Sasaki, Makoto; Takeuchi, Kiyofumi; Takatsu, Haruyoshi
PA Dainippon Ink and Chemicals, Inc., Japan
SO U.S. Pat. Appl. Publ., 41 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C09K019-52
ICS C09K019-34; C09K019-30; C09K019-20; C09K019-12; C09K019-36
INCL 252299700; 252299640; 252299660; 252299610; 252299630; 252299670; 428001100
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 75
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004021128	A1	20040205	US 2003-601803	20030624
JP 2004176038	A2	20040624	JP 2003-154595	20030530
CN 1495246	A	20040512	CN 2003-149318	20030626
PRAI JP 2002-189821	A	20020628		
JP 2002-285617	A	20020930		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004021128	ICM	C09K019-52
	ICS	C09K019-34; C09K019-30; C09K019-20; C09K019-12; C09K019-36
	INCL	252299700; 252299640; 252299660; 252299610; 252299630; 252299670; 428001100
US 2004021128	NCL	252/299.700
	ECLA	C09K019/58B
JP 2004176038	FTERM	4H006/AA01; 4H006/AB64; 4H006/BJ20; 4H006/BJ50; 4H006/BP30; 4H006/GN03; 4H006/GP03; 4H006/GP20; 4H006/KA06; 4H006/KA14; 4H027/BA01; 4H027/BA02; 4H027/BB03; 4H027/BB04; 4H027/BC04; 4H027/BD02; 4H027/BD14; 4H027/BD24; 4H027/CB01; 4H027/CC04; 4H027/CC05; 4H027/CD01; 4H027/CF01; 4H027/CF02; 4H027/CF05; 4H027/CL01; 4H027/CM02; 4H027/CM04; 4H027/CN01; 4H027/CP01; 4H027/CP04; 4H027/CQ03; 4H027/CQ04; 4H027/CS02; 4H027/CT01; 4H027/CT02; 4H027/CT03; 4H027/CU01

OS MARPAT 140:154599
GI



AB A method of increasing helical twisting power (HTP) in an optically active compound used in a liquid crystal material is provided. An optically active compound which exhibits a large HTP value is also provided. Furthermore, a liquid crystal composition which exhibits a high upper temperature limit of the liquid

crystal after the addition of the optically active compound, and a liquid crystal display device using the same are provided. In a method, an HTP of a compound having a partial structure represented by formula I, which has an asym. carbon atom, is increased by replacing the partial structure represented by formula I by a partial structure II (* = position of an asym. carbon atom; Y1 = alkyl group, a halogen).

ST helical twisting compd liq crystal display

IT Liquid crystal displays
(increasing helical twisting power and optically active for liquid crystal composition for)

IT Liquid crystals
(nematic, super-twisted; increasing helical twisting power and optically active for liquid crystal composition)

IT **652990-81-3** 652990-82-4 652990-83-5 652990-84-6
652990-85-7 **652990-86-8** 652990-87-9 652990-88-0
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(liquid crystal composition for liquid crystal display containing)

IT **652990-71-1P** 652990-72-2P 652990-73-3P **652990-75-5P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(liquid crystal composition for liquid crystal display containing)

IT 35684-12-9 38690-77-6 39969-28-3 39969-29-4 52709-83-8
56131-48-7 56359-71-8 58743-75-2 61203-99-4 67589-39-3
67589-41-7 67589-47-3 67589-52-0 80944-44-1 85583-83-1
86776-50-3 86776-51-4 86776-52-5 88038-92-0 92118-82-6
92263-41-7 95478-16-3 95906-34-6 96184-40-6 96184-42-8
107949-21-3 107949-22-4 128060-76-4 129738-42-7 155041-85-3
155417-32-6 184652-93-5 652990-90-4 652990-91-5
RL: TEM (Technical or engineered material use); USES (Uses)
(liquid crystal composition for liquid crystal display containing)

IT **652990-77-7P** 652990-79-9P 652990-80-2P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of helical twisting compound for liquid crystal composition)

IT 4894-61-5 16355-00-3 58574-03-1 61203-95-0 83626-35-1 88581-00-4
129940-69-8 140714-88-1 652990-69-7 652990-74-4 652990-78-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of helical twisting compound for liquid crystal composition)

IT 116209-37-1P 116209-38-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of helical twisting compound for liquid crystal composition)

IT 652990-70-0P
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of helical twisting compound for liquid crystal composition)

IT **652990-81-3** **652990-85-7** **652990-86-8**
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(liquid crystal composition for liquid crystal display containing)

RN 652990-81-3 CAPLUS

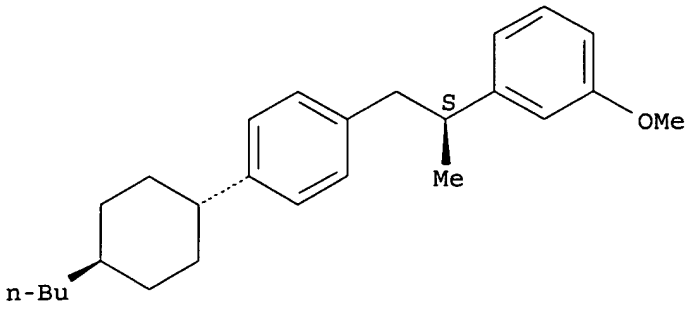
CN Cyclohexanecarboxylic acid, 4-butyl-, 4-ethoxyphenyl ester, trans-, mixt. with 1-[(1S)-2-[4-(trans-4-butylcyclohexyl)phenyl]-1-methylethyl]-3-methoxybenzene, 4-methoxyphenyl trans-4-pentylcyclohexanecarboxylate, 4-(trans-4-pentylcyclohexyl)benzonitrile, 4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-carbonitrile and 4-propoxyphenyl trans-4-pentylcyclohexanecarboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 652990-71-1

CMF C26 H36 O

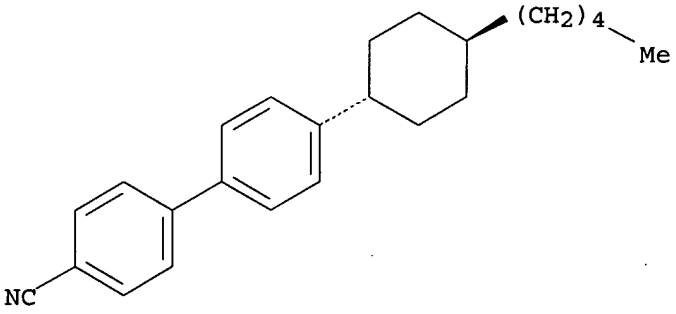
Absolute stereochemistry.



CM 2

CRN 68065-81-6
CMF C24 H29 N

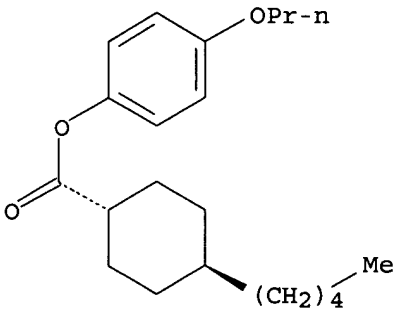
Relative stereochemistry.



CM 3

CRN 67589-54-2
CMF C21 H32 O3

Relative stereochemistry.



CM 4

CRN 67589-52-0
CMF C19 H28 O3